

REMARKS

This Amendment is submitted in response to the Non-Final Office Action dated May 28, 2010. Claims 11, 14-16, 18-21, 25 and 26 are pending in the present application. Claims 11, 14-16, 18-21, 25 and 26 are rejected in the present application. The Commissioner is hereby authorized to charge deposit account 02-1818 for any fees which are due and owing. If such a withdrawal is made, please indicate the Attorney Docket No. 3712174-00478 on the account statement. Applicants respectfully disagree and traverse the rejections, as set forth in detail below.

The Office Action rejected Claims 11, 14-16, 18-21, 25 and 26 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,143,083 to Yonemitsu et al. (“Yonemitsu”) in view of U.S. Patent No. 5,259,881 to Edwards et al. (“Edwards”), U.S. Patent No. 4,492,182 to Martin (“Martin”), and U.S. Publication No. 2001/0006827 to Yamazaki et al. (“Yamazaki”). Of the rejected claims, Claim 1 is the sole independent claim. Claim 1 recites, at least in part, a second alignment mechanism for changing the alignment between the substrate and the mask, and for detachably attaching the substrate and the mask again, wherein the second alignment mechanism is provided to connect the first formation unit and the second formation unit in series thereby providing flow-through processing. As such, flow-through processing benefits can be achieved by conducting the alignment between mask and substrate in line between adjacent formation units.

Moreover, the references fail to disclose or suggest including an alignment mechanism between two formation units, where the alignment mechanism performs a wafer level alignment (or realignment). The Office Action admits that Yonemitsu does not disclose a second alignment mechanism connecting the first and second formation units together, and thus relies on Edwards (in part) for the disclosure of same. However, Applicants respectfully submit that the Edwards reference has been misinterpreted regarding the “alignment chamber 16.” The so-called “alignment chamber” in Edwards is simply a chamber connecting transport modules 12 and 14. Admittedly, Edwards refers to this elements as an aligner, but Applicants respectfully submit that despite this label, element 16 is only an “aligner” in the sense that it physically aligns transport module 12 relative to transport module 14 (e.g., such that the two major units are in-line/parallel/perpendicular to one another). There is no discussion in the whole of Edwards regarding performing a wafer-level alignment in this chamber 16. Indeed, Edwards actually

refers to aligner 16 as a “module aligner” (i.e., referring to the alignment between adjacent transport modules). (See, Edwards, col. 6, line 42). Therefore, at best, Edwards can be relied on for disclosing an empty chamber between the two transport modules, which appears to cumulative to other art cited. In addition, because the Martin reference is only relied on for certain mechanical aspects of the alignment means, none of the cited reference disclose or suggest placing an alignment mechanism in-line between adjacent formation units to facilitation in flow-through processing as recited in the present claims. To conclude otherwise would only be possible with impermissible hindsight reconstruction in view of the teachings of the present application.

Accordingly, Applicants respectfully request that the 35 U.S.C. §103(a) rejection of Claims 11, 14-16, 18-21, 25 and 26 over Yonemitsu in view of Edwards, Martin, and Yamazaki be withdrawn.

Moreover, new Claim 27 recites, at least in part, an apparatus for manufacturing an organic electroluminescence display, the organic electroluminescence display having a substrate, a first electrode layer formed on the substrate, an organic layer including a plurality of organic material layers stacked on the first electrode layer in a predetermined pattern and a second electrode layer formed on the organic layer, the apparatus comprising: a fixture loading chamber including an attachment fixture for attaching the substrate and the mask, the attachment fixture including a magnetic plate and grip portions connected to ends of the magnetic plate, the grip portions projecting outwardly from the ends of the magnetic plate; a first alignment mechanism for aligning a mask, having openings corresponding to the predetermined pattern, to the substrate and for detachably attaching the mask and the substrate; a first formation unit including a plurality of vacuum processing chambers for sequentially forming the plurality of organic material layers on the substrate at a first color position with the substrate attached to the mask; a second alignment mechanism for changing the alignment between the substrate and the mask, and for detachably attaching the substrate and the mask again; and a second formation unit including a plurality of vacuum processing chambers for sequentially forming the plurality of organic material layers on the substrate at a second color position with the substrate attached to the mask, wherein each of the vacuum processing chambers correspond to each of the organic material layers, wherein the second alignment mechanism is provided to connect the first formation unit and the second formation unit in series thereby providing flow-through

processing, wherein each of the first and second formation units include at least one fixture holder, and wherein each of the first and second alignment mechanisms comprise a mask support member connected to a first elevating mechanism and configured to support the mask, a substrate support member connected to a second elevating mechanism and having a plurality of supports for supporting the substrate, the supports being arranged so as not to contact the mask support member when upper portions of the supports are elevated above upper portions of the substrate support member by at least one of the first and second elevating mechanisms, a fixture holder attached to a third elevating mechanism and including holding portions, the fixture holder configured such that the grip portions of the attachment fixture rest on the holding portions of the fixture holder to suspend the attachment fixture therein, and a controller for changing relative positions between the mask support member, the substrate support member, and the fixture holder, whereby the mask and the substrate are aligned, attached, or separated. The new claim is supported, for example, in Figs. 7-13 and on pages 11-14 and 18 of the Specification.

Claim 27 includes, at least in part, additional details regarding the alignment mechanism (relative to Claim 1). With regard to the rejection of Claim 1, the Office Action relied on Marin for disclosing a an "alignment mechanism 20 for aligning a mask 30 having openings corresponding 102, 104 to the predetermined pattern, to the substrate 64 and for detachably detaching and attaching the mask and substrate." (See, Office Action, pg. 3). However, Martin fails to teach or suggest the elements of the alignment mechanism in Claim 27. Independent Claim 27 and Claims 28-31 that depend therefrom are believed to be allowable for at least the reasons given above regarding Claim 1, and for the additional elements recited therein.

For the foregoing reasons, Applicants respectfully submit that the present application is in condition for allowance and earnestly solicit reconsideration of same.

Respectfully submitted,

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